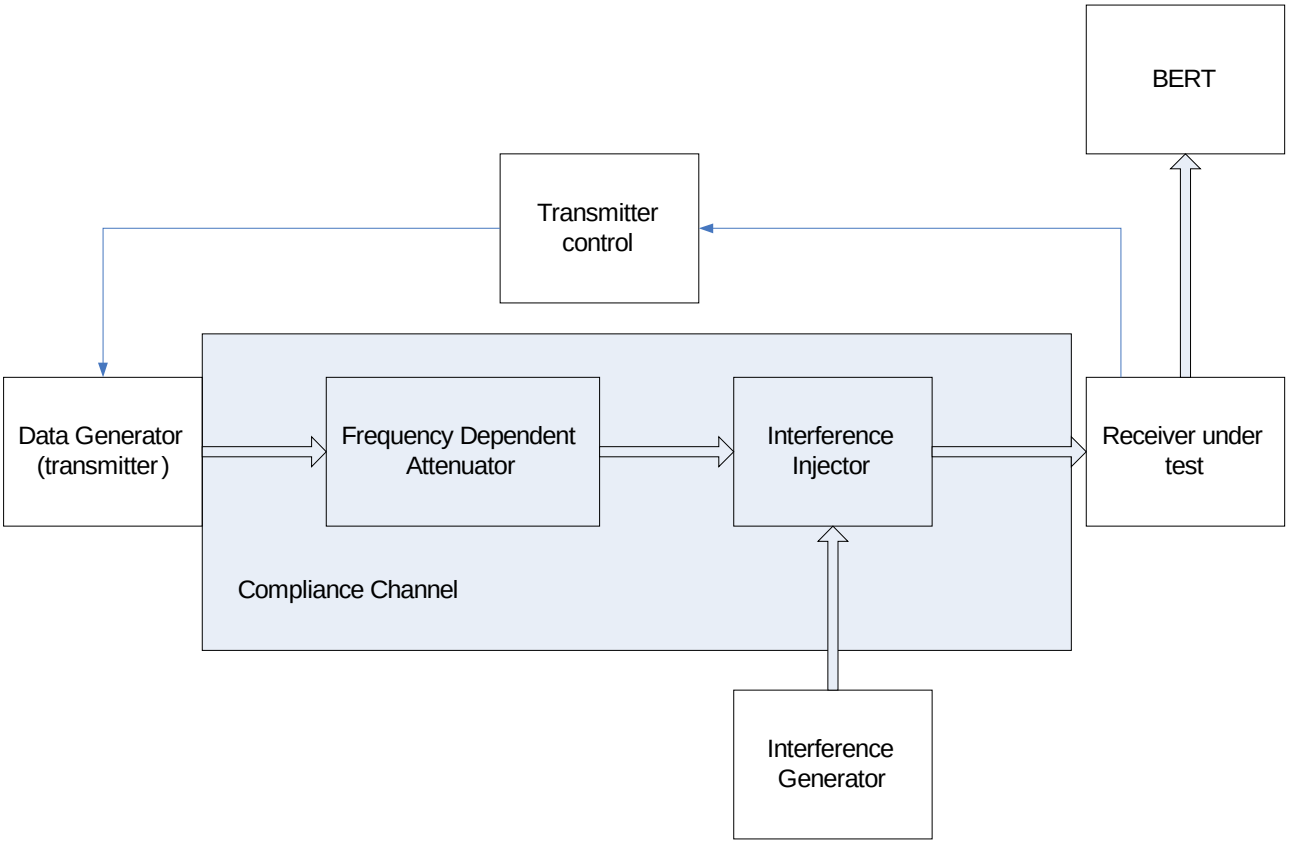
Proposed changes to 802.3ap spec in response to comments: 259, 261, 262(?), 578, 627, 299,576, 121

Replace existing figure 69A-1 with:



Add sub clause 69A.2 “Test Set up” and change:

Existing number	New number
69A.2	69A.2.2
69A.3	69A.2.3
69A.4	69A.2.4
69A.5	69A.3

Add Sub clause 69A.2.1 Data Generator (transmitter)

During any receiver training, if appropriate, the Data Generator shall send an appropriate training pattern prescribed for the port type being tested. During test, the Data generator shall send an appropriate test pattern prescribed for the port type being tested. The amplitude delivered by the Data Generator to the Compliance Channel shall be no greater than the specified minimum transmitter output amplitude for the port type being tested. The Data generator shall be capable of having calibrated jitter imposed on the data transitions as prescribed in 69A.3.

For testing of 10GBASE-KR, the Data Generator may be implement a three tap equalizer, a two tap equalizer, or a single tap. If more than one tap is used, the Data Generator shall be prevented from violating any of the limits on equalization prescribed in 72.6.1.10 during training and all tests. If more than one tap is used, all tests prescribed in 69A.3 shall be performed and pass at at least two different equalizer settings, offset by a Dpst of no less than 0.027.

For testing 10GBASE-KX4, the Data Generator shall be implemented as a two tap equalizer and shall meet the Differential output template prescribed in 71.6.1.6.

For testing 1000BASE-K, the Data Generator shall be implemented as a single tap.

Add sub clause 69A.2.5 Transmitter control

For 10GBASE-KR testing, if the Data generator is implemented as a multiple tap equalizer, the Data generator shall be controlled by a transmitter control. The transmitter control responds to inputs from the receiver to adjust the equalization of the Data generator. The receiver may communicate through its associated transmitter, using the protocol described in 72.5.10, or by other means. The transmitter control shall allow the equalization requested by the receiver under test to be over ruled by external means to allow the equalization offset prescribed in 69A.2.1 to be forced.

In sub clause 69A.3 (was 69A.5, replace the second paragraph with:

The following test shall be performed 4 times with Sinusoidal jitter applied to the Data generator as follows:

Test	***Jitter rate***	***Jitter amplitude***
1	----	none
2	$4x10^{-6}$*Data Rate	5.0UI
3	$4x10^{-5}$*Data Rate	0.5UI
4	$4x10^{-4}$*Data Rate	0.1UI

To measure interference tolerance, first turn the output amplitude of the interference generator to zero. If appropriate allow the DUT to complete auto-negotiation, adjust the equalization of the Data generator, and complete training.

In all sections of annex 69A, replace “compliant transmitter” with “Data generator”.